

Dragon, Karen E. (CDC/NIOSH/EID)

From: Cloonan, Terrence K. (CDC/NIOSH/NPPTL)
Sent: Tuesday, May 06, 2008 4:42 PM
To: Dragon, Karen E. (CDC/NIOSH/EID)
Subject: RE: Additional items for NIOSH Docket 052 (CBRN Respirator User Guidance Documents)

Attachments: JStullcover01.JPG; JStullcmt02.jpg; JStullcmt03.jpg; JStullcmt04_scan0007.JPG; JStullcmt05_scan0008.JPG; JStullcmt06_scan0009.JPG; JStullendpagewCloonancmt_07scan0010.JPG

Jeffrey Stull, President, International Personal Protection company. Hand written comments on draft CBRN SCBA User's Guide Training Aid, dated September 23, 2005: 5 sets of comment pages separate from identification cover page and end page.



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CBRN SCBA User's Guide

Training Aid

September 23, 2005

*Comments
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Done
9 Dec 05*



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DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

Foreword

*Red ink
acknowledgements
& corrections
by T.K.Chandan
22 Nov 05*

The purpose of the CBRN SCBA User's Guide Training Aid is to educate individual respirator wearers, team leaders, supervisors and incident commanders about the selection, operation, protections, cautions, limitations, in-use life requirements, and use recommendations regarding NIOSH-approved CBRN protected SCBA.

This training aid pamphlet is an educational resource created to enhance the safety and health of responders using self-contained breathing apparatus (SCBA) respirators approved with chemical, biological, radiological, and nuclear (CBRN) protection awarded by the Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). NIOSH-approved CBRN SCBA protect emergency responders against all hazards associated with CBRN terrorism and traditional hazards created by fire, hazardous materials or natural disasters. CBRN SCBA contribute to greater national response preparedness by significantly enhancing the technical design and protection qualities of the national inventory of respirators available to responders.

The pamphlet is a companion document to the technical *NIOSH CBRN SCBA User's Guide**. The pamphlet summarizes key user topics that are more fully explained in the parent technical publication. It is designed to fit into the cargo pocket of a user and made available for easy reference. The training aid should not be viewed as a complete reference for use of a CBRN SCBA, but rather as a note-taking device for individuals who have received training on a CBRN SCBA, in conjunction with the recommendations from the NIOSH SCBA User's Guide. Both publications serve as complements to, not substitutes for, a required compliant respiratory protection program.

A list of NIOSH-approved CBRN SCBA is available on the NIOSH website at: <http://www.cdc.gov/niosh/nptl/topics/respirators/cbrnapproved/scba/>.

For more information about NIOSH-approved respirators and respirator use guidelines call 1-800-35-NIOSH.

Director, National Institute for Occupational Safety and Health
Centers for Disease Control and Prevention

* CBRN SCBA User's Guide: Technical Use of Chemical, Biological, Radiological, and Nuclear (CBRN) Open Circuit, Pressure-Demand, Self-Contained Breathing Apparatus (SCBA) Respirators Certified Under Title 42, Code of Federal Regulations, Part 84. DHHS Publication No. _____.

Step 1 SCBA Label

Verify that the CDC NIOSH CBRN Agent Approved adhesive label is on the SCBA back-frame! If the label is scratched or unreadable, confirmation of CBRN protection should be made with the manufacturer or NIOSH.

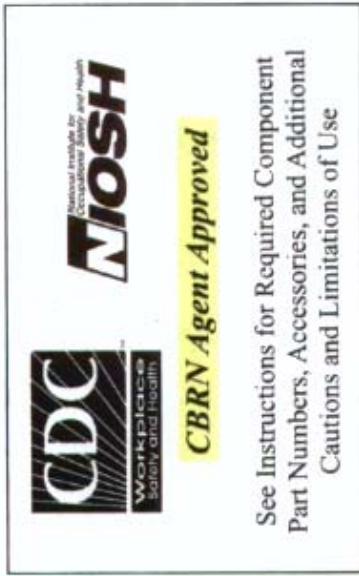


Figure 2. Example of a CDC NIOSH CBRN Agent Approved adhesive label.

This same style of label may say "Retrofit" if the SCBA was a previously deployed industrial SCBA which was later upgraded to CBRN.

Retrofit
or NFPA-compliant ✓ *Added verbiage*



Figure 3. Example of a CDC NIOSH CBRN Agent Approved adhesive label (Retrofit).

Step 2 Required Compliance Labels

Verify that your CBRN SCBA is assembled only with the parts listed in the NIOSH matrix-style approval label included with the user instructions.



Figure 4. Example of a NIOSH CBRN SCBA matrix-style approval label.



Figure 5. Actual back frame assembly with affixed CDC NIOSH CBRN agent approved label, NIOSH abbreviated harness label and SEI compliance label. All three labels are required for NIOSH CBRN SCBA certification.

Photo Courtesy of Interspiro

✓ NFP - National Fire Protection Association. NFPA Standard 1981, Standard on Open-Circuit, Self-Sustained Breathing Apparatus < href> is a prerequisite for CBRN approval of the SCBA.

CBRN USE

The following NIOSH cautions and limitations appear in Section 3 of the CBRN SCBA matrix-style approval label (see step 2) and along with the industrial use limitations just described, apply specifically *to use in CBRN environments.*

- (5) for ✓ even better
- Q Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazards.
 - R Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
 - T Direct contact with CBRN agents require proper handling of the SCBA after each use and between multiple entries during the same use. Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, dispose of the SCBA after decontamination.
 - U The respirator should not be used beyond six hours after initial exposure to chemical warfare agents to avoid possibility of agent permeation.
- (6) (CBRN agent) - OK, but in parentheses
but in ventilation.
- (7) (continued)



OK - but
but in
parenthesis

Step 4 CBRN Respirator Use Life (CRUL)

Step 5 User's Instructions (UI)

CBRN Respirator Use Life (CRUL) is a time value assigned to the specific type of CBRN respirator based on given time values specified in the NIOSH approved cautions and limitations. The CRUL value for a CBRN SCBA is six hours. When a CBRN SCBA is contaminated with a chemical warfare agent (CWA) in vapor, aerosol, or liquid form, it has a limited in-use life of **six continuous hours**, beginning at the time of an exposure. The time of CWA exposure is determined by using qualitative or quantitative detection methods in the field, or by laboratory analysis of SCBA removed from the site.

Remember:

- The time period is **six continuous hours**, not a sum of smaller, **separate** time periods of intermittent use
if used not used
- At the six-hour mark, the entire SCBA must be decontaminated and disposed of properly
- The SCBA cannot be reused following the six-hour period
- CWAs are nerve and blister agents
 - **Nerve agents** include: GA (Tabun), GB (Sarin), GD (Soman), GF (cyclohexyl Sarin), and V-series agents, such as VX
 - **Blister agents** include: H (sulfur mustard), HD (distilled sulfur mustard), nitrogen mustard (HN-1, HN-2 and HN-3) and Lewisite (L, L-1, L-2 and L-3)

The User's Instructions (UI) are included with every purchase of a new CBRN SCBA and typically include guidance on:

- Checks for unique parts labeled "CBRN" by the manufacturer
- Pre-use and in-use checks
 - Donning and doffing
 - Fit-testing and user seal checks
- Unit assembly
- Air cylinder inspection
- Cautions and warning statements unique to each respirator model
- Inspection checklists
- How to verify that the hydrostatic test date on the cylinder is current
- Regulator function (both first stage and second stage regulators)
- Function of all end-of-service-time-indicators (EOSIIs)
- Function of heads up display (HUD)
- Integrity of hoses for damage and tight hose connections
 - Function of personal alert safety systems (PASS) if present
 - Function of air hatches, **or** compact demand valves, **or** other **specific SCBA features**



✓ Changed
✓ Set hatches w/
✓ Other changes to respirator

Step 6 Facepiece Indications of Concern

You may have donned the SCBA facepiece incorrectly if:

A) The inside of the facepiece is fogged over

Corrections

- Use anti-fog solution
- Redon the facepiece
- Check that the air is fully turned on
- Seek training or re-training on use of HUD
- Low pressure in cylinder -- seek recharge

B) The second stage regulator or air hatch will not operate correctly or mate properly with the facepiece

Corrections

In a clean atmosphere:

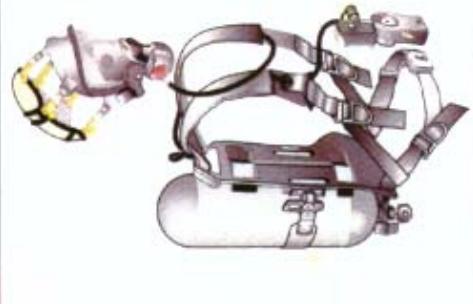
- Disconnect and reconnect the regulator per manufacturer instructions or manually open and close the air hatch per manufacturer instructions
- Ensure facepiece matches make and model of regulator/SCBA
- Ensure locking mechanisms are fully seated and not broken
- Ensure debris is not in the facepiece or regular connection ports

C) Heads up display (HUD) is not working

Corrections

- Inspect the HUD for damage
- Ensure the batteries are in place and are serviceable

- Reconnect the second stage regulator to the facepiece to ensure that it is correctly attached
- Ensure the electronic connections of the HUD are clean (if applicable)



Step 7 Decontamination

Have a plan for the decontamination (decon) and disposal of contaminated CBRN SCBA.

The six-hour continuous use life concept includes the decontamination process, but not the disposal of CBRN SCBA following use in a chemical warfare agent (CWA) environment. CWA are nerve agents and blister agents (See Step 4).

If known or suspected contamination is present on the CBRN SCBA, quickly conduct gross decontamination using all available systems such as ladder truck decon or other field expedient decon operations using high volume, low pressure clean water, to remove surface CBRN agent contamination. Contain and properly dispose of contaminated run-off wash.

Certain CBRN agents will not be neutralized while others will be hydrolyzed or diluted while being physically washed off equipment surfaces using these techniques. Contamination avoidance, mitigation, and decontamination practices should be planned out and trained for in advance.

Confirmed contaminated SCBA must be discarded in accordance with local regulatory HAZWOPER requirements. If time permits, users should ensure that known or potentially contaminated CBRN SCBA are double bagged in plastic, labeled with the type of contamination, the amount/type of decontamination solution used, and the technique used to conduct gross decontamination. The amount of exposure time for contaminated SCBA and the amount of CBRN contamination are also beneficial information relative to disposal. Local, state, and federal disposal procedures for specific CBRN agent contamination should be followed.

A decontamination method specific to the type of CBRN contamination present may contribute to the efficacy of decontamination operations. Seek decontamination guidance from the local incident commander, state public health department, or lead federal agency onsite, or SCBA manufacturer:

Detection of CBRN agents on SCBA is situational dependent and subject to qualified quantitative methodology review by the lead federal agency.

Appendix A: SCBA Example Schematic

of an Air Hatch type CBRN SCBA

Notes

Components Of A NIOSH-Approved CBRN Protected SCBA

